MONTANA FISH, WILDLIFE & PARKS
INTERIM (#2) PERFORMANCE REPORT

STATE: **MONTANA**
GRANT TITLE: **Loon Ecology Project**
AGREEMENT: **T - 10 - 2**
PERIOD COVERED: **January 1, 2006 through December 31, 2006**

Objective

The objective of this project is to determine habitat and population characteristics and the migration/winter locations for common loons, a species of special concern, breeding or migrating through northwest Montana, including the Flathead Indian Reservation. This information will be used to revise and update the Common Loon Conservation Plan for Montana outside of Glacier National Park.

Location

The project was conducted in northwest Montana from the Blackfoot and Clearwater drainages west to the Idaho border and north to the Canada border. This project included information from surveys of lakes within Glacier National Park. That data collection effort is coordinated through the Common Loon Working Group and was gathered by staff and volunteers working for the Park. The expanded project also includes the study of migratory loons using the Flathead Indian Reservation.

Accomplishments

Banding-Resights Common Loons:

- Captured and banded 24 new birds, which raised our total marked population to 154. These birds represent 38 of the less than 70 known territories. Territories range from just south of Eureka, in northwest Montana, to near Ovando, east of Missoula. Two new successful territories were established: Finger Lake north of Whitefish and Summit Lake just off the Swan Highway.
- Recovered a dead banded breeding female near her nest on Island Lake.
- Recovered a juvenile originally captured on Dickey Lake who was found near Santa Cruz, California in poor health. It was rehabilitated and released in the northeastern part of San Francisco Bay.
- We recovered an unbanded adult on Cedar Creek Reservoir while searching for a banded female that disappeared when her chick was less than two weeks old.
- Observed a juvenile banded in 2005 from Martin Lake in Morro Bay, California. This is the same location that the banded female from Lower Stillwater Lake winters.
- Began building a GIS landscape and establishing collection protocol for habitat measurements for nearly 700 lakes in northwest Montana.
- Began collecting data on the number of fledged young per territorial pair. Continued to collect survival data for the adult portion of the marked population.

- Sent 2006 biological samples (blood, feathers, and eggs) to BioDiversity Research Institute (BRI), Gorham ME, a non-profit research group focused on avian conservation and aquatic toxicology (http://www.briloon.org). This organization has been investigating common loons and other higher trophic level piscivorous wildlife as vital indications of aquatic integrity for many years.
- Counted loons in both May and July for approximately 45 GNP lakes as well as monitored nesting success for about 5 loon nesting territories through use of Citizen Science program in Glacier National Park.

Results from 4 radios implanted in common loons during the fall of 2005 (maps attached):

- #58869 is currently the only active transmitter. Two transmitters had premature battery failure (58870 and 58872). While the manufacture states a 20% error on the hours of transmission, these two transmitters ceased functioning far earlier than expected.
- #58871 stopped transmitting in the spring, just as it was changing duty cycles. The voltage sensor for the battery had all normal readings the last few locations. Over six months later, four one-day locations were received from the previous wintering grounds. These locations were of poor quality. The voltage was good, but the internal temperature of the transmitter was 50^{o} F. Without any more transmissions it is unlikely a fate will be definite.
- During migration #58869 has been located at Pyramid Lake and Walker Lake in multiple years. #58871 used the reservoir at Jordanelle State Park, UT for both fall and spring migration. Other than Flathead Lake and the Gulf of California, these four birds have not been located on the same bodies of water.
- #58869 and #58872 used a separate migration route in the spring versus the fall, while 58871 used the same route east of the Nevada desert for both spring and fall.
- None of these birds were located on Flathead Lake in 2006. Fewer birds were spotted on East Bay and Polson Bay in fall 2006 than fall 2005. No birds were captured in the spring or fall. The final two transmitters may be sent to Darwin Long in CA, to be implanted in loons in Morrow Bay this winter. This is a known wintering site for Montana's breeding loons.
- Over 10,000 hits have been recorded to the www.seaturtle.org/tracking/ "Migrating Common Loons" webpage since October 2005.

Variances

Due to low numbers of birds migrating on Flathead Lake during fall 2006, the last 2 radios to be implanted in migratory common loons have not yet been deployed. There is a possibility that a cooperating researcher in California could capture Montana banded loons or immature birds hanging with Montana birds in an effort to get additional migratory information.

Expenditure Recap:

Proposed:

	Federal Share		Match		Total
Direct Costs	88,004.00		29,334.67		117,338.67
Indirect Costs	15,752.72		5,250.91		21,003.29
Total	103,756.72	75.0%	34,585.57	25.0%	138,342.29

Current Expenditures:

	Federal Share		Match		Total
Direct Costs	35,600.04		13,782.66		49,387.70
Indirect Costs	5,889.52	75.0%		25.0%	5,889.52
Additional Match			22,313.35		22,313.35
Total	$ 41,489.56		$ 36,096.01		$ 77,585.57

Current Expenditures:

Contracts – CSKT & BioDiversity	23,356.18
Grad Student & Asst. Salaries	
Per Diem	
Supplies	647.96
Travel	11,583.90
Other Expenses	12.00
Equipment Maintenance	
Total	$ 35,600.04

Current Match Sources:

Cash	6,271.00
In-kind (volunteers, lab analysis, waived overhead)	29,825.01
Total	$ 36,096.01

The required 25% non-federal match ($13,782.66) was exceeded by $22,313.35, which was generated from extra volunteers' time from surveying lakes and streams in Glacier National Park for loon habitats.

Total Expenditures (previously reported & current)

	Federal Share		Match		Total
Direct Costs	82,386.77		32,231.85		114,618.62
Indirect Costs	14,310.80				14,310.80
Total	96,697.57	75.0%	32,231.85	25.0%	128,929.42

Project Personnel

Name	Title	Phone	Email
Gael Bissell	Wildlife Biologist, Kalispell	406-751-4580	gbissell@mt.gov
Kristi DuBois	Native Species Coordinator	406-542-5551	kdubois@mt.gov
Adam Brooks	Federal Aid Program Manager	406-444-3032	abrooks@mt.gov
Brett Gullett	Wildlife Biologist – CSKT	406-675-2700	brettg@cskt.org